Lancashire Curriculum Tests

Year 6 – End of Summer Term

(Meeting end of year expectations)

Mathematics

Paper 2: reasoning

First name	
Middle name	
Last name	

Total marks	

Lancashire County Council

Instructions

You **may not** use a calculator to answer any questions in this test.

Questions and answers

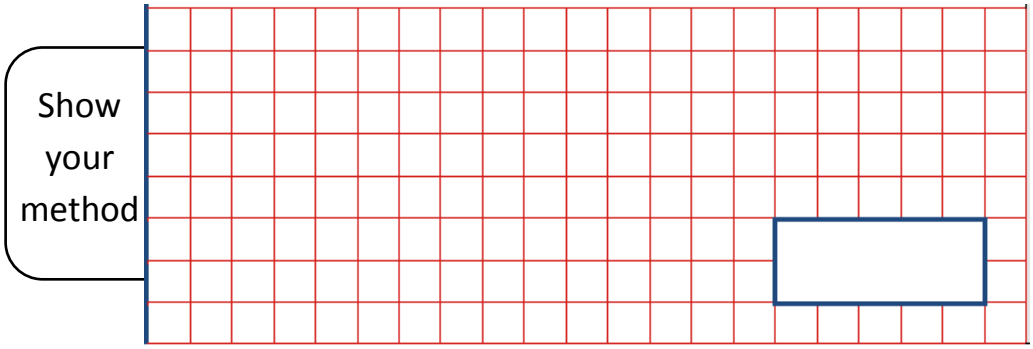
You have **40 minutes** to complete this test.

Follow the instructions for each question.

Work as quickly and as carefully as you can.

If you need to do any working out, you can use the space around the question.

Some question have a method box like this:



For these questions, you may get a mark for showing your method.

If you cannot do one of the questions, **go on to the next one**.
You can come back to it later if you have time.

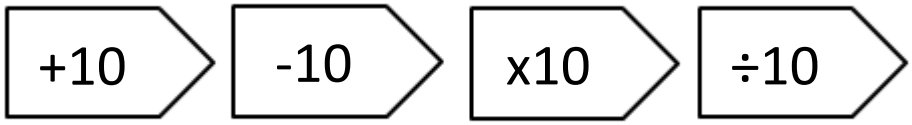
If you finish before the end, **go back and check your work**.

Marks

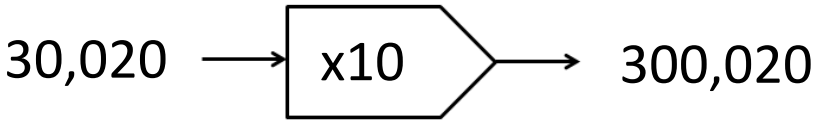
The number under each line at the side of the page tells you the maximum number of marks available for each question.

1 Fill in the boxes to complete each number chain.

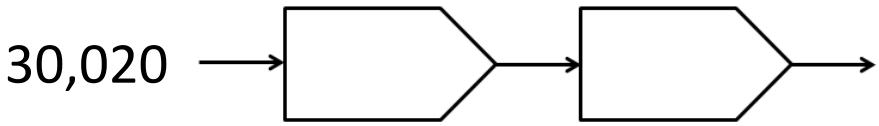
Use any of the following.



The first one has been done for you.

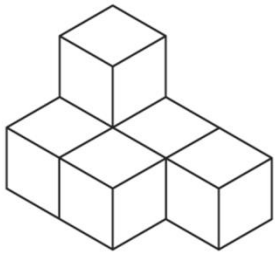


1 mark

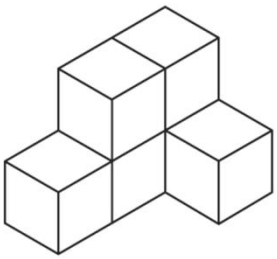


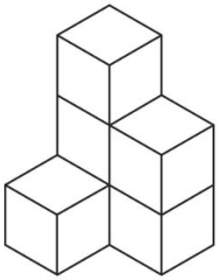
1 mark

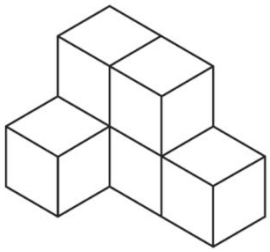
2 This shape is made from six cubes.

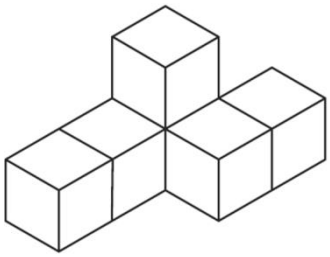


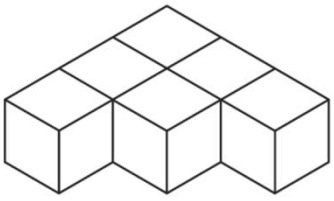
Tick the **shapes** that are the same.











1 mark

3 Multiples of 6 are **also** multiples of which numbers?

1 mark

4 Fill in the missing numbers.

75% of 40 = $\frac{1}{2}$ of ☐

☐

1 mark

50% of ☐ = $\frac{1}{6}$ of 360

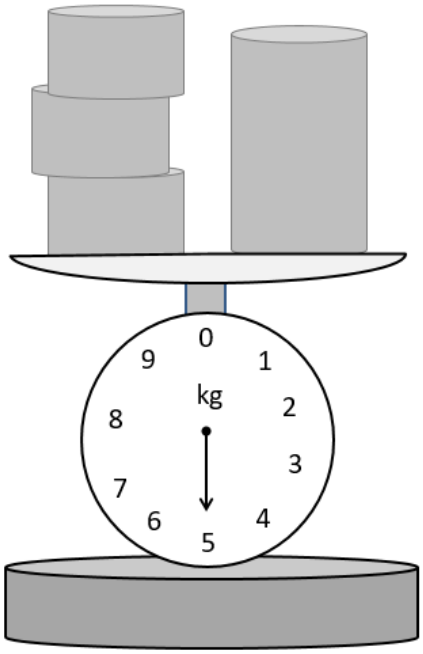
☐

1 mark

5 There are three small tins and one large tin on these scales.

The three small tins each have the **same mass**.

The mass of the large tin is **3.2kg**.



What is the mass of **one** small tin?

Show your method

2 marks

6 There are 125 children in Year 6.

65 of them do not have a pet.

Complete the table below.

	girls	not girls
has a pet	27	
does not have a pet		36

2 marks

7 Put **brackets** in the calculation to make the answer **50**

$$4 + 5 + 1 \times 5$$

1 mark

Now put **brackets** in the calculation to make the answer **34**

$$4 + 5 + 1 \times 5$$

1 mark

8 A bus travels for $2\frac{1}{2}$ hours at a mean speed of 58 miles per hour.

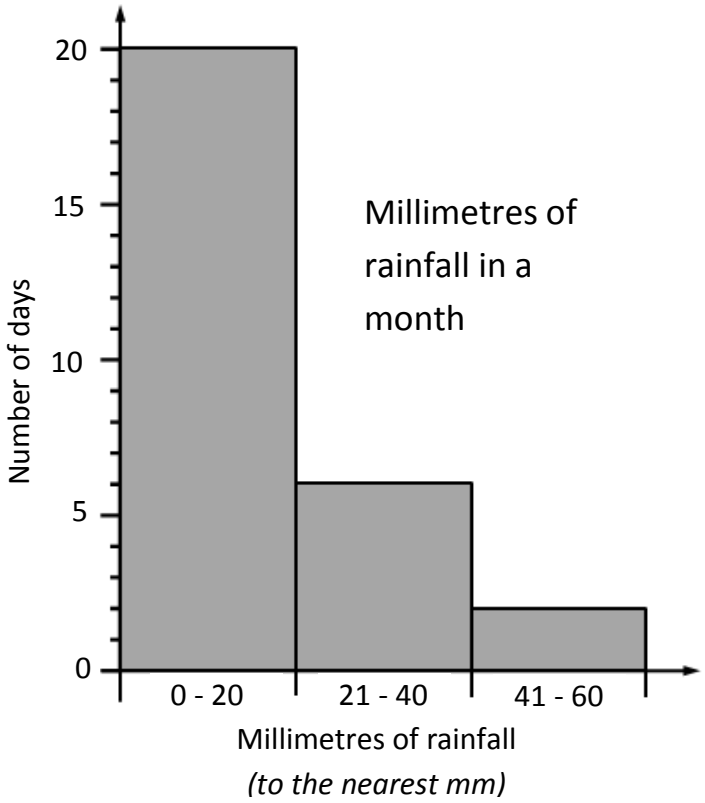
How far does the bus travel in that time?

miles

1 mark

9 Lin measures the amount of rainfall in a month and draws a graph of her results.

Ben says, 'The month is March.'

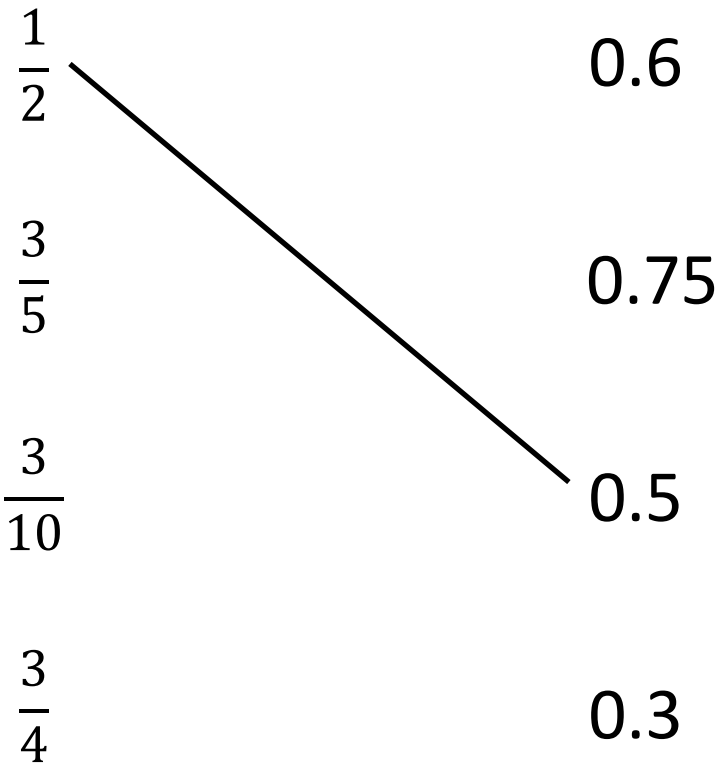


Explain why Ben is **not** correct.

1 mark

10 Join each fraction to the correct decimal.

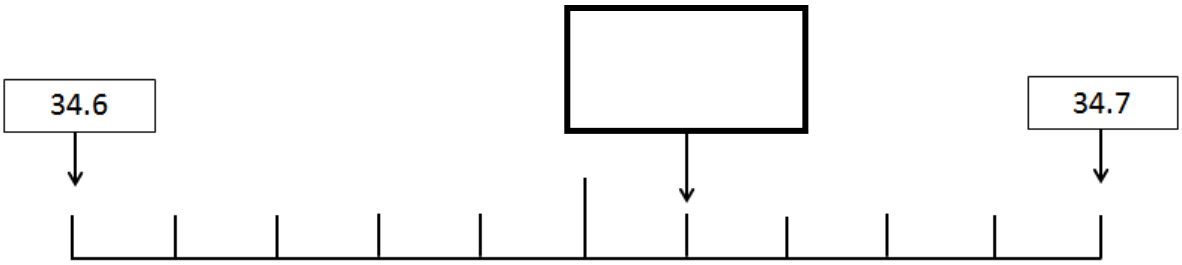
The first one has been done for you.



1 mark

11 Here is part of a number line.

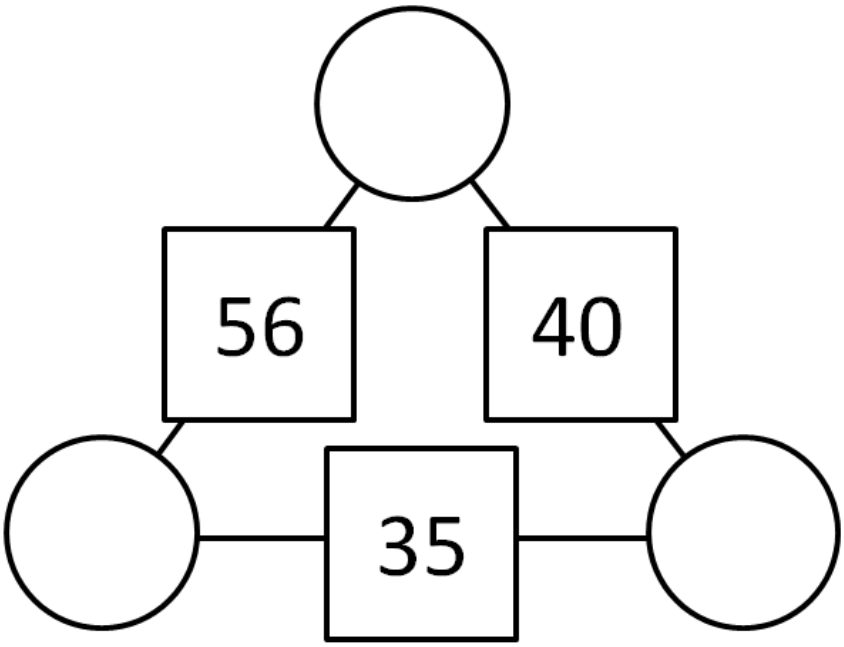
Write in the missing number.



1 mark

12 Each square is the **product** of the two numbers on either side of it.

Complete the diagram.



1 mark

13 Here are the costs of tickets for a concert.

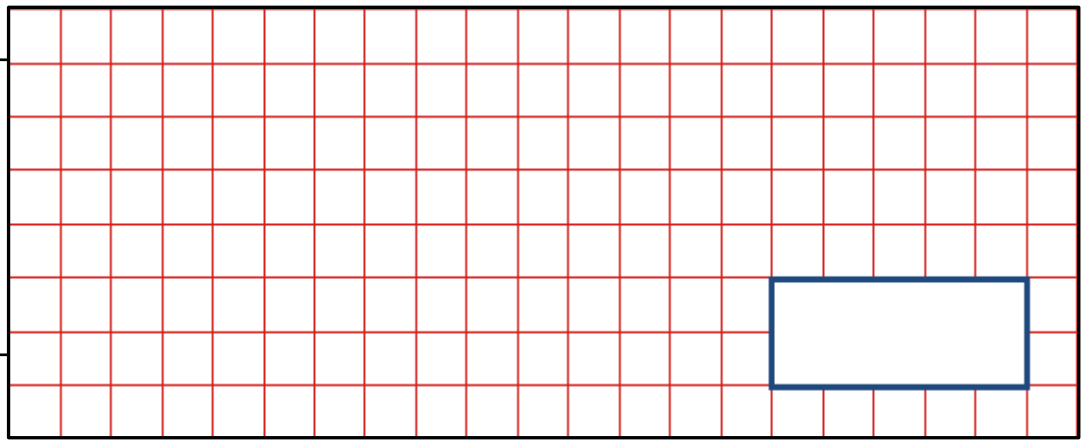
Concert Tickets	
Adults:	£25.75 each
Children:	£15.50 each

Four adults go to the concert with **some** children.

Altogether, their tickets cost **£196**

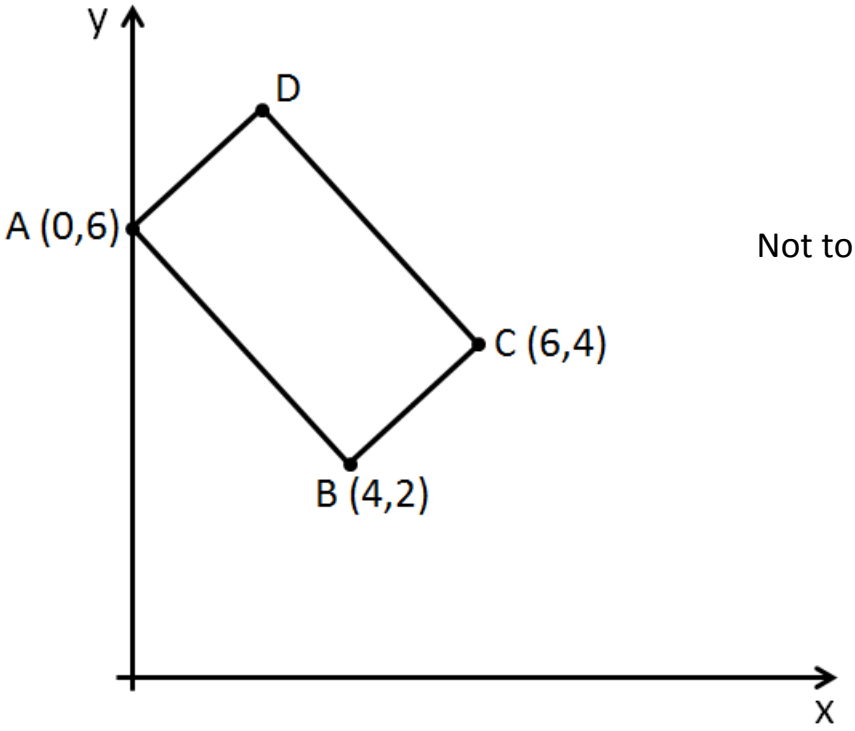
How many **children** went to the concert?

Show your method



3 marks

14 In the diagram below, shape ABCD is a **rectangle**.



Not to scale

What are the coordinates of point **D**?

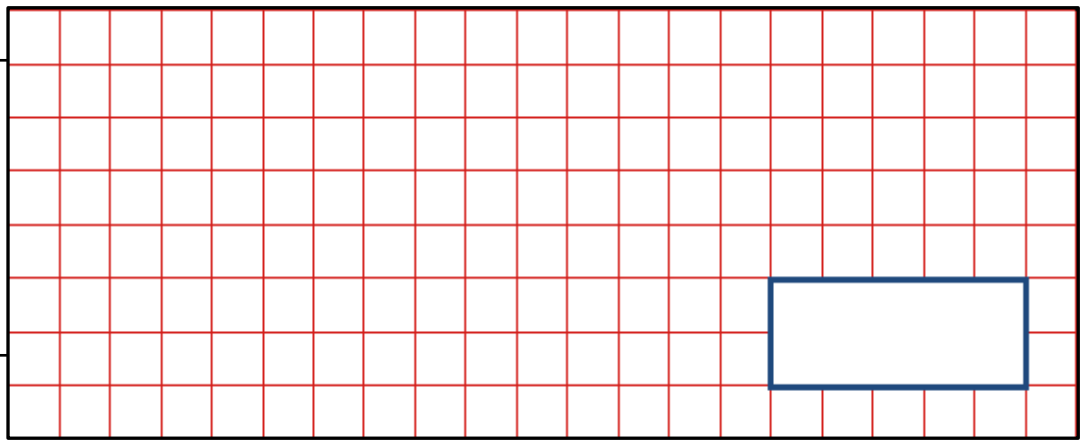
_____

1 mark

15 10 packets of crisps cost £3.50

What is the cost of **6** packets of crisps?

Show your method



2 marks

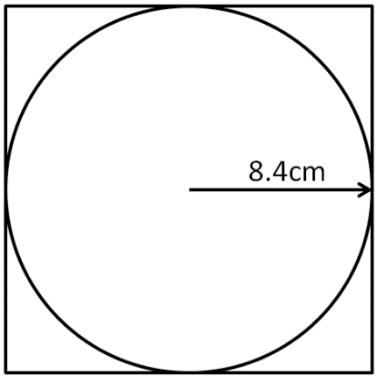
16 Tick **all** the numbers that would round to **7.2** to **one** decimal place.

7.24	7.19	7.12	7.23	7.27

1 mark

17 This circle fits exactly inside the square.

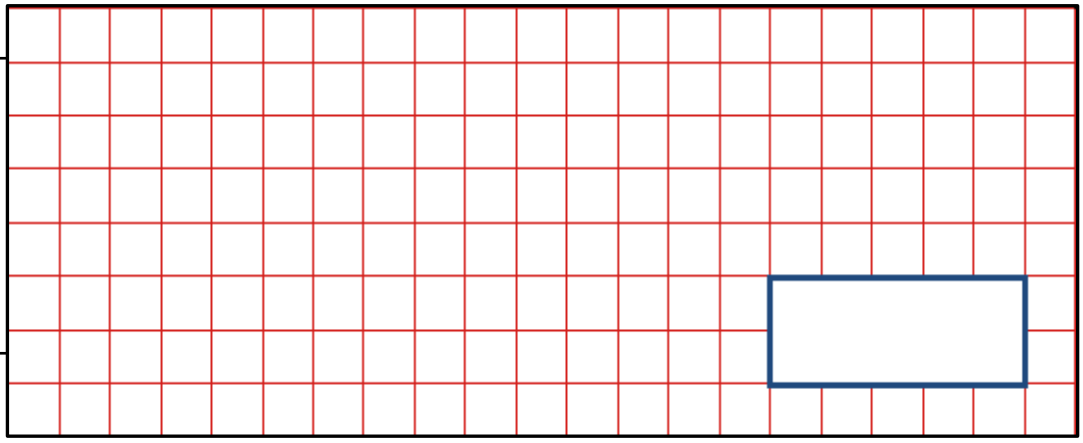
The **radius** of the circle is 8.4cm.



Not to scale

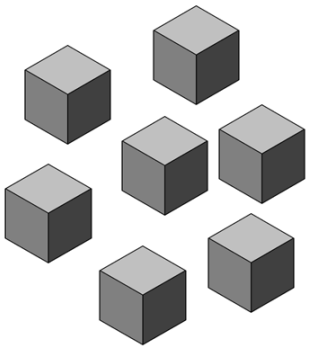
What is the **perimeter** of the square?

Show your method



2 marks

18 Sara has some centimetre cubes.



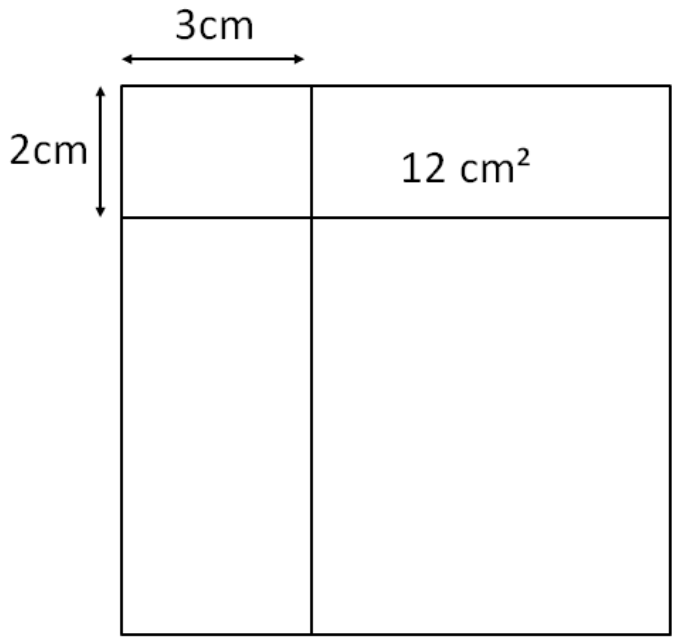
How many does she need to make a **cuboid** that measures 5cm by 4cm by 3cm?

1 mark

19 This diagram shows a square.

Two straight lines cut the square into four rectangles.

The area of one of the rectangles is shown.



Not to scale

What is the **area** of the whole square?

cm²

1 mark

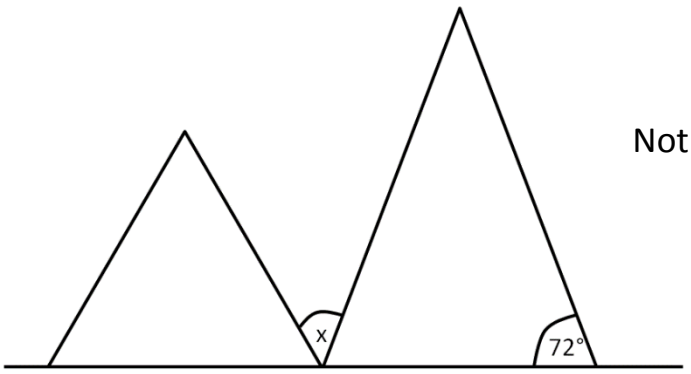
20 Lin says, "There are **1,440** minutes in **one day**."

Explain how Lin could have worked it out.

1 mark

21 The triangle on the left is **equilateral**.

The triangle on the right is **isosceles**.



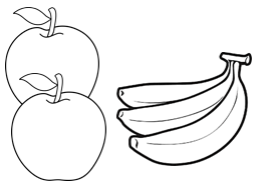
Not to scale

Calculate **angle x**.

2 marks

22 Lin and Ben go to the fruit shop.

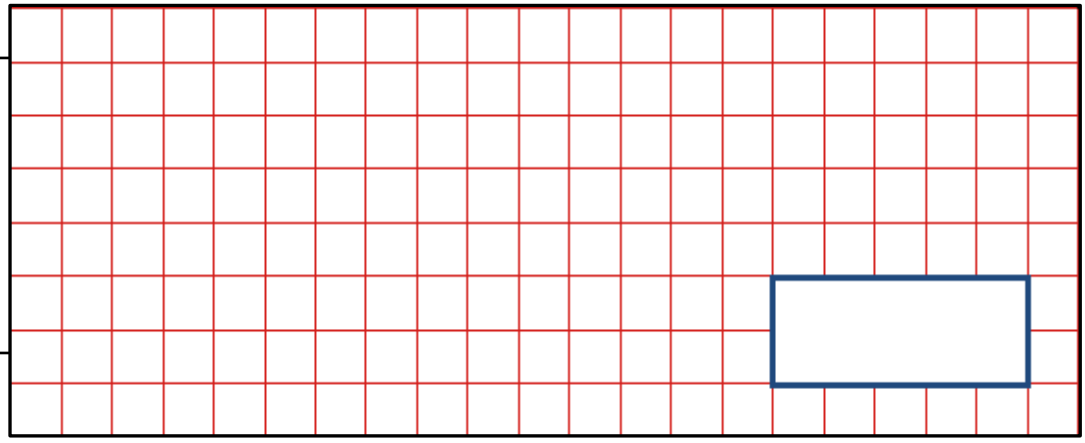
Lin buys two apples and three bananas. She pays £1.60



Ben buys two apples and one banana. He pays 90p

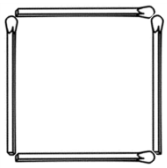
How much does **one** banana cost?

Show your method

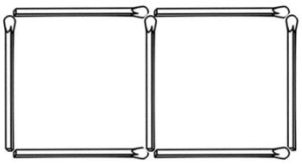


2 marks

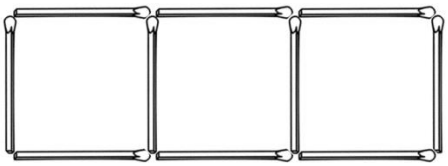
23 Ben is making a pattern of squares with matches.



1 square needs **4** matches



2 squares need **7** matches



3 squares need **10** matches

If he continues this pattern, how many **squares** will he make with **40 matches**?

squares

1 mark

24 Draw an **equilateral triangle** with sides of 7.5cm

Use a pencil, ruler and protractor.

1 mark

END OF TEST